

# PATENT ABSTRACTS OF JAPAN

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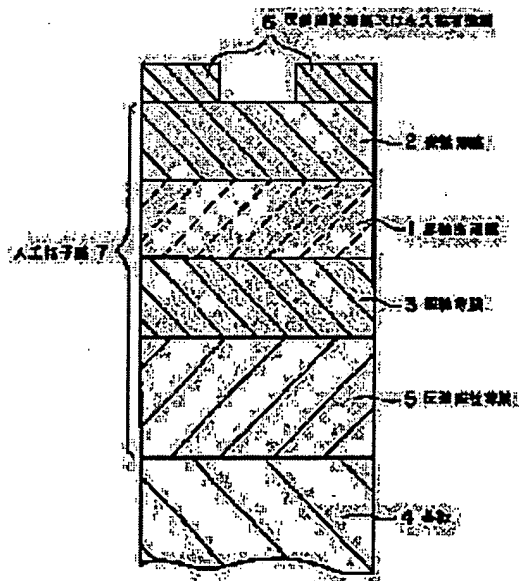
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## (54) MAGNETO-RESISTIVE FILM, ITS PRODUCTION AND MAGNETORESISTANCE EFFECT ELEMENT

(57)Abstract:

PROBLEM TO BE SOLVED: To form a magneto-resistive film linearly varying the resistance before and behind a zero magnetic field and excellent in corrosion resistance.

SOLUTION: This magnetoresistive film consists of plural magnetic thin films 2, 3 laminated on a substrate 4 while interposing a nonmagnetic thin film 1 between the films 2, 3. An antiferromagnetic thin film 5 is previously disposed under the magnetic thin film 3. When the intensity of the bias magnetic field of the antiferromagnetic thin film 5 is represented by  $H_r$  and the coercive force of the magnetic thin film 2 is represented by  $H_{c2}$ , the inequality  $H_{c2} < H_r$  is satisfied. At least a part of the antiferromagnetic thin film 5 has a two-layered structure formed by laminating CoO in 10-40 $\text{\AA}$  thickness on NiO or NiMn having an fct structure.



## LEGAL STATUS

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